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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,743	09/10/2003	Naritosi Ohtsukasa	031146	3388
23850	7590	07/12/2005	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			FISCHMANN, BRYAN R	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/658,743

Applicant(s)

OHTSUKASA, NARITOSI

Examiner

Bryan Fischmann

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

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A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Acknowledgements***

1. The Preliminary Amendment dated 09-10-2003 has been entered.

***Specification***

2. The abstract of the disclosure is objected to because of the following:

A) The abstract is too long. Per 37 CFR 1.72 and Section 608.01(b) of the MPEP, the abstract shall not exceed 150 words in length. The Instant Abstract is approximately 180 words long.

3. The specification is objected to because of the following:

A) The following recited phrases are unclear, awkwardly worded, and/or grammatically incorrect:

Note: The specification is considered to be replete with objectionable matter. Therefore, a comprehensive listing of all objectionable matter cannot be guaranteed. Applicant is advised to review the specification for objectionable matter.

1) Page 2 recites "...there are demands for miniaturizing the engine so as to reduce fuel economy".

This recited phrase is objected to, as it seems to imply that there is a "demand" to reduce fuel economy, which seems unlikely.

2) The recitation of "to be planned boldly", as recited in line 1 of page 3 is considered awkward.

3) The recitation of "the torque is short" in the middle of page 4 is considered unclear.

4) To improve wording, it is believed that the word "that" should appear before the word "exceeds" on line 3 of page 6.

5) It is noted that the Applicant has referred to specific claim numbers on pages 6-8. This practice is considered objectionable, as the claims are subject to cancellation, renumbering, or amendments so that what is being specifically referred to by claim numbers on pages 6-8 may no longer be directly applicable in the "final version" of the claims.

6) It is requested Applicant identify the "units" of the ratio "g/PS h" recited on page 12.

7) The lower portion of page 12, to the bottom of page 13 recites "In the case of, for example, the light-load mode in which the arm, the bucket and the like oscillate, that a case that only 80% of the capacity with reference to the capacity of the engine are needed and the iso-horsepower curve of the necessary horsepower is the curve L3, while the torque at the intersection point of the governor characteristic curve 15 and the iso horsepower curve L3 is smaller than that the rating output point of the engine 1, the number of revolutions of the engine is reduced than the intersection point and the driving torque is increased, and the horsepower is made to exceed the iso-horsepower curve L3. In this way, the fuel consumption rate (fuel consumption efficiency) of the engine 1 can be increased. In this case, the torque increased from the point A1 the point B1 approximate to the best point X. That is, the torque B1, which is larger than the driving torque D1 necessary on the iso-horsepower curve L3, is to be generated. Therefore, the difference between the point B1 and the point D1 is used as

the surplus torque so as to operate the power generator 11. Thereby, the battery 12 is charged".

This recitation is objected to due to the following:

a) As best understood, the "intersection" of the curve L3 and the characteristic curve 15 would be toward the right-side of Figure 1, "proximal" reference number 15. .

b) However, the above paragraph seems to imply that this "intersection" of curves L3 and 15 is point A1. From examination of Figure 1, this does not appear to be correct.

c) The above recitation, as best understood, describes how engine speed is reduced from the "intersection point" of curves L3 and 15, best understood, as noted above to be point A1. According to the above recitation, as best understood, the "engine speed reduction" occurs from point A1 to point B1. However, Figure 1 shows "points" A1 and B1 to be at the same engine speed.

d) Due to this, the above recitation seems inconsistent with Figure 1. Perhaps it would be helpful if the "intersection point" of L3 and B1 were identified by a reference character.

8) It is believed that the words "iso horsepower" that appear on line 1 of page 13 should be "hyphenated". Compare to other similar recitations of these words on pages 12 and 13.

9) Lines 3 and 4 of page 13 are considered to be awkward and unclear.

10) The lower portion of page 16 recites "performing a run". The meaning of this recited phrase is considered unclear.

### ***Drawings***

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the case of a load mode where an engine torque at an intersection point of an iso-horsepower curve of a necessary horsepower and a governor characteristic curve of the engine is smaller than that, of a rating output point of the engine, the number of revolutions of the engine is reduced and the engine torque is increased with reference to the intersection point, as set forth in claim 1 must be shown or the features canceled from the claim. No new matter should be entered.

5. Figures 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

6. Figure 5 is objected to due to the following:

- a) The "label"  $T_3$  on the "ordinate" of Figure 5 is not legible.
- b) In the "vicinity" of  $T_3$  on Figure 5, the "parameter" curves 1-7 seem to be "horizontally misaligned".

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by

the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

7. Claims 1-4 are objected to because of the following:

A) Claim 1 recites "in a case of a load mode where an engine torque at an intersection point of an iso-horsepower curve of a necessary horsepower and a governor characteristic curve of the engine is smaller than that, of a rating output point of the engine, the number of revolutions of the engine is reduced and the engine torque is increased with reference to the intersection point".

As best understood, this recitation is supported by pages 12 and 13 which recites: "The lower portion of page 12, to the bottom of page 13 recites "In the case of, for example, the light-load mode in which the arm, the bucket and the like oscillate, that a case that only 80% of the capacity with reference to the capacity of the engine are needed and the iso-horsepower curve of the necessary horsepower is the curve L3, while the torque at the intersection point of the governor characteristic curve 15 and the iso horsepower curve L3 is smaller than that the rating output point of the engine 1, the number of revolutions of the engine is reduced than the intersection point and the driving torque is increased, and the horsepower is made to exceed the iso-horsepower curve L3. In this way, the fuel consumption rate (fuel consumption efficiency) of the engine 1 can be increased. In this case, the torque increased from the point A1 the

point B1 approximate to the best point X. That is, the torque B1, which is larger than the driving torque D1 necessary on the iso-horsepower curve L3, is to be generated. Therefore, the difference between the point B1 and the point D1 is used as the surplus torque so as to operate the power generator 11. Thereby, the battery 12 is charged".

This recitation is objected to due to the following:

a) As best understood, the "intersection" of the curve L3 and the characteristic curve 15 would be toward the right-side of Figure 1, "proximal" reference number 15. .

b) However, the above paragraph seems to imply that this "intersection" of curves L3 and 15 is point A1. From examination of Figure 1, this does not appear to be correct.

c) The above recitation, as best understood, describes how engine speed is reduced from the "intersection point" of curves L3 and 15, best understood, as noted above to be point A1. According to the above recitation, as best understood, the "engine speed reduction" occurs from point A1 to point B1. However, Figure 1 shows "points" A1 and B1 to be at the same engine speed.

d) Due to this, the above recitation seems inconsistent with Figure 1.

Due to this, the above claim 1 recitation seems to lack "antecedent basis", and is inconsistent with the above portion of the specification and Figure 1. All of this leaves unclear whether engine speed stays "constant" per points A1 and B1 of the above disclosure, or is "reduced" per the above claim 1 recitation. Perhaps it would be helpful



if the "intersection point" of L3 and B1 were identified by a reference character, as it now appears that this "intersection point" in A1.

B) The recitation of "the assist running" in claim 4 is objected to, as claim 4 is dependant upon both claims 1 and 2, as it is believed that antecedent basis for this recitation is only found in claim 2.

### ***Allowable Subject Matter***

8. Claim 1 would be allowable if rewritten or amended to overcome the claim objection set forth in this Office action.

9. Claims 2-4 would be allowable if rewritten to overcome the claim objections set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims.

### **Reasons for Allowance**

10. The following is an Examiner's statement of reasons for allowance of independent claim 1:

Claim 1 recites the limitation of construction machinery comprising; an engine, a hydraulic pump; and an actuator; wherein in a case of a load mode where an engine torque at an intersection point of an iso-horsepower curve of a necessary horsepower and a governor characteristic curve of the engine is smaller than that, of a rating output point of the engine, the number of revolutions of the engine is reduced and the engine torque is increased with reference to the intersection point, and the engine is allowed to run with a horsepower exceeding the iso-horsepower, and by a surplus

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torque generated therefrom, a power generator is operated so as to generate an electric power, which is accumulated in a power accumulation apparatus. This limitation, in combination with the other limitations of claim 1, were not found in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

11. This application is in condition for allowance except for the following formal matters:

The abstract, specification, drawing and claim objections set forth in this Office Action.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


A) Naruse, et al (2 documents), Yoshiamtsu, et al, Kagoshima, et al, Kagoshima, Yoshimatsu, Oguri – teach "hybrid-type" construction equipment

B) Woon, et al, JP 60-30430 – teach “constant horsepower control” of equipment

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Bryan Fischmann whose telephone number is (571) 272-6694. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the Examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis, can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 7-8-5  
**BRYAN FISCHMANN**  
**PRIMARY EXAMINER**